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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/812,027
Filing Date: March 30, 2004
Appellant(s): SPENCER ET AL.

Randy A. Noranbrock
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 19, 2005 appealing from the Office action mailed January 26, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,917,435	Kamiya et al	6-1999
6,091,956	Hollenberg	07-2000

4,942,529	Avitan et al	07-1990
5,889,337	Ito et al	03-1999

Kodama, JP-10-213443, August 1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC ∋ 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3, 5-17, 30-31, 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al (U.S Patent No. 5,917,435) in view of Kodama (JP 10-213443) and further in view of Hollenberg (U.S Patent No. 6,091,956).

As per claim 1, Kamiya discloses a vehicle navigation system which comprises: a computer module 2 (fig.1) including a processor 20 (fig.1) and a map database 21 (fig.1) (col.9, lines 31-34); a docking station (col.13, lines 27-31). Kamiya does not explicitly disclose a docking station which is matable with the computer module station, and including at least a navigation sensor matable to the computer module station. However, Kodama teaches including a removable navigation sensor to a removable module (paragraph [0006], [0011], [0029], and [0039]), and Hollenberg discloses a docking station 40 (fig.7) which is matable with the computer module 2d (fig.7) (col.19, lines 63-67; col.20, lines 1-24). It would have been obvious

to a person of ordinary skill in the art at the time the invention was made to include the inertial sensor and the docking station of Hollenberg to the system of Kamiya in order to provide navigation data when the device is removed from the vehicle and to provide support to a specific housing of the navigation processor.

As per claim 3, Kamiya does not explicitly teach including a GPS receiver to the computer module. However, Kamiya teaches including the GPS receiver in a removable module would have been known (fig.30; col.1, lines 14-23), Kamiya further teaches removing several navigation components from the vehicle (col.12, lines 15-18). Further, Kodama teaches including a GPS receiver in the same computer module (paragraph [0011]-[0012]). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the GPS receiver to the removable computer module of Kamiya as known in the prior arts in order to provide navigation to the user when the removable unit is detached from the vehicle.

As per claim 5-6, Kamiya teaches a first and a second electric connector (col.18, lines 8-20; col.13, lines 35-53).

As per claim 7, Kamiya does not disclose connecting the first electrical connector to a GPS receiver. However, Hollenberg teaches providing electrical connection to the GPS receiver on the computer module (col.20, lines 4-11). It would have been obvious to a person of ordinary

skill in the art at the time the invention was made to provide electrical connection with the GPS receiver when the GPS receiver is in the computer module in order to facilitate data communication between the GPS receiver and the antenna.

As per claim 8-9, Kamiya teaches including an display operator interface module connected to the second connector (col.18, lines 8-20).

As per claim 10, Kamiya teaches fixedly mounting a docking station in a first vehicle (col.4, lines 19-24).

As per claim 11, Kamiya teaches including means for determining a position of the navigation system relative to the map database (col.13, lines 18-24; col.4, lines 1-13).

As per claim 12, Kamiya does not teach determining a route from a beginning point to an ending point. However, determining a route from a beginning point to a destination point would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow the user to obtain navigation help by inputting the source and destination point to the computer module of Kamiya in order to provide the user help when the source and destination point is known.

As per claim 13-15, 30-31, 33, refer to discussion in claim 1, 3-5, 9, 11-12 above.

As per claim 16-17, Kamiya in view of Hollenberg do not disclose providing a second docking station that is fixedly mounted in a second vehicle and the operator interface module is selectively connectable to the first or the second docking station. However, Kamiya teaches providing a docking station on a vehicle and an operator interface removably connectable to the docking station (col.11, lines 46-51; col.12, lines 11-18; col.18, lines 8-20). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement a docking station of Kamiya to a second vehicle and selectively connect the removable operator interface of Kamiya to the first or the second vehicle. Since implementing a duplicate device to another vehicle and connecting a movable device to another vehicle requires only routine skill in the art.

As per claim 34, refer to discussion in claim 16-17 above.

As per claim 35, refer to discussion in claims 1 and 30 above. Further, automatically calibrating a sensor when the sensor is first implemented in a vehicle would have been well known.

As per claim 36-38, refer to discussion in claim 4, 9, and 34 above.

3. Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al (U.S Patent No. 5,917,435) in view of Kodama (JP 10-213443) and further in view of Avitan et al (U.S Patent No. 4,942,529).

As per claim 18, refer to discussion in claim 1, 2-3 above. Kamiya does not disclose a computer module that includes first, and second vehicle data; and the computer module utilizing the first or second vehicle data when the computer module is installed in the first or the second vehicle data, respectively. However, Avitan teaches a computer module that uses the first or the second vehicle data when the module is installed in the first or the second vehicle, respectively (col.3, lines 43-53). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include vehicle data of several vehicles to the computer module of Kamiya and to use suitable data depending on which vehicle the computer module is installed. The motivation for this would have been to facilitate implementing the control module to different vehicles as motivated by both Kodama (paragraph [0039]) and Avitan in col.3, lines 43-46.

As per claim 19, Avitan teaches providing a user interface for the user to input regarding whether to use the first vehicle data or the second vehicle data (col.3, lines 51-53).

As per claim 20, Kamiya teaches a display interface 221 (fig.1). Kamiya and Avitan do not explicitly disclose including user operable switches for selecting between the first and the second vehicle data. However, Avitan teaches providing manually operable selection means for the user to select between the first and the second vehicle data (col.3, lines 51-53). Further using

switches as inputs for selecting one from a plurality of function would have been well known to a person of ordinary skill in the art at the time the invention was made. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the well known switches to the module of Avitan in order to facilitate selection between the first and the second group of data.

As per claim 21, Avitan does not teach that the first and the second vehicle data that includes information regarding the orientation of the computer module. However, storing the orientation of the computer module to track the position of a vehicle would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to store the orientation of the vehicles in the first and second memory area the computer module of Avitan in order to facilitate tracking the position of the vehicles.

As per claim 22, Avitan teaches propagating first or second vehicle data when the computer module is used in the first or the second vehicle respectively (co.3, lines 51-52, 59-64). Avitan does not teach propagate position of the vehicle based on the first and the second vehicle data. However, transmitting position of a vehicle based on the position data of the vehicle would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to transmit the position of the vehicles on which the computer module of Kamiya is installed in order to provide accurate navigation to the driver of the vehicle.

4. Claims 23, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al (U.S Patent No. 5,917,435) in view of Kodama (JP 10-213443) and further in view of Ito et al (U.S Patent No. 5,889,337).

As per claim 23, 40, refer to claim 1 above. Kamiya teaches removably securing a CPU in a first vehicle (col.18, lines 14-17); removing the CPU from the first vehicle (col.11, lines 46-51).

Kamiya does not teach removably securing the CPU in a second vehicle. However, Ito teaches implementing a compatible cavity with universal connector to simplified assembling process (col.1, lines 66-67; col.2, lines 1-7; col.3, lines 31-37, lines 12-15). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the cavity and the electric circuit of Ito to the vehicles in order to allow the CPU of Kamiya to be easily removably installed in different vehicles.

Kamiya in view of Ito does not teach removing and implementing the inertia sensor in different vehicles. However, Kamiya implies that other components in a vehicle could obviously be movable (col.12, lines 15-18), and Kodama explicitly teaches including a removable inertia sensor to the removable computer module (paragraph [0006], [0011], , [0029], and [0039]). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to remove and to implement the inertia sensor of Kamiya to/from one vehicle to another vehicle as taught by Kodama in order to facilitate implementing the navigation module to different vehicle as motivated by Kodama in paragraph [0039].

5. Claims 24-28, 39, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al (U.S Patent No. 5,917,435) in view of in view of Kodama (JP 10-213443) and further in view of Ito et al (U.S Patent No. 5,889,337) and Avitan et al (U.S Patent No. 4,942,529).

As per claim 24-27, Kamiya teaches determining the position of a vehicle based upon data from the inertial sensor (col.1, lines 50-53; col.2, lines 10-14). Kamiya does not teach storing and propagating position data of the first or the second vehicle. However, refer to discussion in claim 22 above for the claim limitation in view of Avitan. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to store and propagate data depending on the specific vehicle in which the computer module is installed as taught by Avitan to the system of Kamiya in order to facilitate installation of a module to different vehicle as motivated by Avitan in col.3, lines 59-64).

As per claim 28, Avitan teaches manually selecting whether to use the first vehicle data of second vehicle data via user input device (col.3, lines 51-53).

As per claim 39, 41-42, refer to discussion in claim 26-28 above.

As per claim 43, Kamiya in view of Ito do not teach connecting the GPS antenna to the roof of a vehicle and connecting the GPS receiver to the antenna. However, including a detachable antenna to a vehicle, and connecting the antenna to the GPS receiver would have been

well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use removable antenna and to attach the antenna to the GPS receiver of Kamiya in order to use one antenna for multiple devices.

As per claim 44, Kamiya in view of Ito do not explicitly disclose connecting the receiver to the power supply of the vehicles. However, Kamiya discloses connecting the removable module to a vehicle power supply (col.13, lines 35-53), further, the receiver requires electric power to be active would have been known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect the receiver to the power supply of the vehicle of Kamiya when the receiver is incorporated in the detachable module in order to provide proper electrical power to the receiver to be active.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al (U.S Patent No. 5,917,435) in view of Kodama (JP 10-213443) and further in view of Ito et al (U.S Patent No. 5,889,337), Avitan et al (U.S Patent No. 4,942,529) and Hollenberg (U.S Patent No. 6,091,956).

As per claim 29, refer to discussion in claim 1 above. Kamiya does not explicitly disclose mating one inertial sensor with a docking station. However, Kodama teaches the claimed limitation (paragraph [0006], [0011], [0029], and [0039]).

(10) Response to Argument

Issue 1: in page 11, third to fourth paragraph-page 12 first two paragraphs (item 1), the appellant asserts that Kamiya's detachable unit fails to include a navigation sensor or a docking station and that the examiner fails to identify a motivation to combine the references of Kamiya, Kodama and Hollenberg. The following is the examiner's answer:

Response 1: Kamiya discloses a detachable unit 2 (fig.1) including a processor 20 (fig.1) (Kamiya col.2, lines 7-9, 25-27). Although Kamiya does not explicitly disclose including a navigation sensor to the detachable unit, Kamiya teaches that including a navigation sensor to the navigation module would have been known (Kamiya, col.1, lines 26-27). Furthermore, Kodama teaches a including removable inertial navigation sensor 12 (fig.2) and a GPS receiver 11 (fig.2) in the removable navigation device 2 (fig.2) (para 0006, 00011, 0039), the removable navigation device 2 includes the processor 23 (fig.2) (para 0012). Kodama further suggests a motivation for using removable navigation device including the navigation sensor in paragraph 0006 and para 39. The motivation suggested by Kodama is to facilitate lenting the navigation device including the navigation sensor to a friend, or to facilitate transferring the navigation device including the navigation sensor in a new car (Kodama para 0006, 0039). Also the motivation to provide docking station 40 (fig.7) taught by Hollenberg is to facilitate mounting portable navigation device or removing the portable navigation device as taught by Hollenberg in col.20, lines 32-45.

Issue 2: In page 12, last paragraph - page 13 first paragraph (of item 2), the appellant asserts that Kodama fails to teach a computer module selectively matable with a docking station and including navigation sensor. The appellant asserts that the combination of Kodama and Kamiya does not disclose the computer module includes a navigational sensor. The following is the examiner's response:

Response 2: in paragraph 0012, Kodama teaches a navigation device body 2 including the control processing part 23 (fig.2) for determining vehicle position on a map. In paragraph 0009, Kodama teaches integrating the inertial navigation sensor 12 (fig.2) to the navigation device 2 (fig.2). The whole navigation device is of course removable in view of Kodama's teaching in para 0039 because the navigation device taught in paragraph 0039 actually includes the control processing part 23 (fig.2), this navigation device is removable because it can be lent to a friend. Therefore, the complete navigation system including the processor 23 (fig.2) in unit 2 (fig.2), and the navigation sensor 12 attached to the navigation device 2 (fig.2) are removable and matable into another car in view of Kodama's teaching.

Issue 3: in page 14, second paragraph (item 1), the appellant asserts that neither Kamiya nor Kodama teaches a computer module including a CPU and at least one inertial sensor and a GPS receiver.

Response 3: Kamiya teaches a computer module 2 (fig.1) including a CPU 20 (fig.1), and Kodama teaches an inertial sensor 12 (fig.2) and a GPS receiver 11 (fig.2) (Kodama fig.2 and para 0009, 0011). Kodama further suggests that the *navigation device* including navigation body 2 with CPU 23 (fig.2), the inertial sensor 12 (fig.2) and GPS receiver 11 (fig.2) *be removable* in paragraph 0039. Therefore, the inertial sensor 12 (fig.2), GPS 11 (fig.2) taught by Kodama can certainly be attached to the removable navigation module taught by Kamiya. The motivation for this would have been to facilitate implementing the complete navigation device including the CPU, the inertial sensor and the GPS receiver into another car when the navigation device is lent to another car as suggested by Kodama in para 0039 and 0006.

Issue 4: in page 14, (item 2) through page 15, third paragraph (item 3), the appellant asserts that the Avitan system does not fairly envision installation of a computer module in a first vehicle and subsequently in a second vehicle. Rather, Avitan discloses including vehicle data for both the first and second vehicles in two computer modules, one of the computer modules is installed in a first vehicle and the other installed in a second vehicle. The following is the examiner's response:

Response 4: Concerning removable navigation device including a processor, an inertial sensor and a GPS receiver, refer to the discussion in issues 1-3 above.

Concerning item 2 and 3, in para 0027, Kodama teaches accumulating *pre-storing* current vehicle position in an internal memory, and Kodama teaches that the navigation device including the inertial sensor and GPS receiver is removable (para 0039, 0006). Kodama does not explicitly disclose utilizing first vehicle data when the navigation module is installed in the first vehicle, and utilizing second vehicle data when the navigation module is installed in the second vehicle. However, since the navigation device taught by Kodama can be installed in the first vehicle, then it can be installed in the second vehicle (para 0039, 0006), using pre-stored vehicle current position of the first vehicle when the navigation device is mounted on the first vehicle in order to provide correct navigation and correct position representation on the map to first vehicle (not the position of the second vehicle where the navigation device is not in) would have been obviously within the knowledge of an ordinary person skilled in the art. Moreover, Avitan teaches storing sets of data of different vehicle in the same memory and allowing the user to select the set of data that will be used in the vehicle in which the memory is in (Avitan col.3, lines 49-56), using the suggestions from Avitan, by storing prestored current position data of different vehicles in a removabale memory, and allowing the user to select appropriate set of data for use in the vehicle in which the navigation device is in would have been well within the knowledge of an ordinary person skilled in the art at the time the invention was made.

Issue 5: in item 1 page 15, last paragraph through page 16, first two paragraphs, the appellant asserts that Kamiya fails to disclose removably securing the inertial sensor in a vehicle and Kodama fails to disclose removable securing a CPU in a vehicle. Then in item 2, the appellant asserts that Ito fails to cure the deficiencies of Kamiya and Kodama.

Response 5:

Concerning item 1 on removable CPU and the inertial navigation sensor, refer to the response in issues 1-3 above. Kamiya discloses a removable computer module 2 (fig.1) with CPU 20 (fig.1), and Kodama discloses a removable "*navigation device*" in para 0039, the removable *navigation device* is disclosed in fig.2 of Kodama including the inertial sensor 12 (fig.2), the GPS receiver 11 (fig.2) *and the navigation device body 2* (fig.2) (Kodama para 0009, 0012). The removable navigation device taught by Kodama in para 0039, 0006 clearly includes the CPU, the inertial sensor and the GPS receiver. Furthermore, the base 13 (fig.2) including the inertial sensor 12 and GPS receiver 12 (fig.2) can certainly by plugged onto the removable navigation device taught by Kamiya. The motivation for including the inertial sensor and the GPS receiver is clearly taught by Kodama in para 0006 and para 0039, the motivation taught in the paragraphs is for facilitating installing of the navigation device together with

the GPS receiver and inertial sensor when the navigation unit is transferred to a new car.

Concerning item 2, Ito teaches a vehicle electronic apparatus for mounting a car navigation device on (Ito col.1, lines 5-8; col.2, lines 47-49), the apparatus taught by Ito is to facilitate the implementation of detachable navigation electronic device on to the switch panel (Ito col.2, lines 39-42, line 43, and lines 47-49). Since the navigation device taught by Kodama and Kamiya is just a navigation board, the navigation board taught by Kamiya and Kodama can be used in the apparatus suggested by Ito in col.2, lines 47-49. The motivation for using the apparatus taught by Ito is to facilitate mounting detachable navigation board of Kamiya and Kodama as suggested by Ito in col.2, lines 39-42, line 43, and lines 47-49.

Concerning issues sections IV-V in page 17-18 of the appeal brief, refer to the response in issue I-V above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

March 2, 2006

THU V. NGUYEN
PRIMARY EXAMINER

Conferees:

Thomas Black

Yonel Beaulieu